

CLAIMS

I claim:

5 1. A fastener having a recess constructed in the head thereof for engagement with a driver, said recess comprising:

10 a first portion constructed to receive a driver in torque transmitting engagement, wherein said driver is one of a group constructed in accordance with the industry standard for type I cross recessed fasteners or for type Ia cross recessed fasteners; and

15 a second portion constructed to receive a driver in torque transmitting engagement, wherein said driver is constructed in accordance with the industry standard for type III square recessed fasteners.

20 2. A fastener having a recess constructed in the head thereof for engagement with a driver, as described in claim 1, wherein said first portion is constructed having cross slots formed by opposing walls which comprise the driving surfaces of said fastener, wherein adjacent 25 opposing walls symmetrically converge from said top to said bottom to form an included angle according to the standard for type Ia cross recess fasteners.

30 3. A fastener having a recess constructed in the head thereof for engagement with a driver, as described in claim 2, wherein said included angle is 2.5 degrees.

4. A fastener having a recess constructed in the head thereof for engagement with a driver, as described in

claim 2, wherein said adjacent opposing walls are each inclined at an angle of 1.25 degrees to the vertical to cause said convergence.

5 5. A fastener having a recess constructed in the head thereof for engagement with a driver, as described in claim 1, wherein said first recess has an overall geometry and is formed to a first depth and said second recess is formed to a second depth, said second depth
10 being less than said first depth, thereby forming said second recess within said geometry of said first recess.

6. A fastener having a recess constructed in the head thereof and extending a first distance from a top and to
15 a bottom for engagement with a driver, said recess comprising:

20 a cross slotted portion, having an overall cross slot geometry, and extending said first distance from said top to said bottom of said recess, said slots being formed by opposing walls, wherein said opposing walls converge symmetrically, from said top to said bottom, at an included angle according to the standard for type Ia
fasteners.

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7. A fastener having a recess constructed in the head thereof and extending a first distance from a top and to a bottom for engagement with a driver, said recess, as described in claim 6, wherein said included angle is 2.5
30 degrees.

8. A fastener having a recess constructed in the head thereof and extending a first distance from a top and to a bottom for engagement with a driver, said recess, as

described in claim 6, wherein said adjacent opposing walls are each inclined at an angle of 1.25 degrees to the vertical to cause said convergence.

5 9. A fastener having a recess constructed in the head thereof and extending a first distance from a top and to a bottom for engagement with a driver, said recess as described in claim 6, further comprising:

10 a square portion, having an overall square geometry, extending a second distance, that is less than said first distance, wherein said overall square geometry is within said overall cross slot geometry.

15 10. A method of forming a recess in the head of a fastener comprising the steps of:

20 forming a cross slotted recess portion into said fastener head extending a first depth from a top and a bottom, and having an overall cross slot geometry, said slots being formed by opposing walls, wherein said opposing walls converge symmetrically, from said top to said bottom, at an included angle according to the standard for type Ia fasteners.

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11. A method of forming a recess in the head of a fastener, as described in claim 10, wherein said included angle is 2.5 degrees.

30 12. A method of forming a recess in the head of a fastener, as described in claim 10, wherein said opposing walls are each inclined at an angle of 1.25 degrees to the vertical to cause said convergence.

13. A method of forming a recess in the head of a fastener, as described in claim 10, further comprising the step of:

5 forming a square recess portion into said fastener head extending a second depth from said top, and having an overall square geometry, wherein said second depth is less than said first depth, whereby said overall square geometry is within said overall cross slot geometry.

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14. A tool for forming a recess, said tool having a working portion extending from a shank to a tip a first distance, said working portion of said tool comprising:

15 a cross winged portion extending said first distance from said shank to said tip having an overall cross wing outer profile, said wings being formed by adjacent walls, wherein said adjacent walls converge, from said shank to said tip, symmetrically at an included angle according to
20 the standard for type Ia fasteners.

15. A tool for forming a recess, said tool having a working portion extending from a shank to a tip a first distance, said working portion of said, as described in
25 claim 14, wherein said included angle is 2.5 degrees.

16. A tool for forming a recess, said tool having a working portion extending from a shank to a tip a first distance, said working portion of said, as described in
30 claim 14, wherein said opposing walls are each inclined at an angle of 1.25 degrees to the vertical to cause said convergence.

17. A tool for forming a recess, said tool having a working portion extending from a shank to a tip a first distance, said working portion of said tool, as described in claim 14, further comprising:

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a square portion, having an overall square outer profile, extending a second distance, that is less than said first distance, wherein said overall square outer profile is within said overall cross wing outer profile.

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18. A tool for forming a recess, said tool having a working portion extending from a shank to a tip a first distance, said working portion of said tool, as described in claim 14, wherein the tool is used to form a recess in
15 the head of a fastener.

19. A tool for forming a recess, said tool having a working portion extending from a shank to a tip a first distance, said working portion of said tool, as described
20 in claim 14, wherein the tool is used to form a cavity in die.

20. A driver for engaging a recess in the head of a fastener in torque transmitting relation having an engagement portion extending from a shank to a tip a first distance, said engagement portion of said driver comprising:

30 a cross winged portion extending said first distance from said shank to said tip having an overall cross wing outer profile, said wings being formed by adjacent walls, wherein said adjacent walls converge, from said shank to said tip, symmetrically at an included angle according to the standard for type Ia fasteners; and

a square portion, having an overall square outer profile, extending a second distance, that is less than said first distance, wherein said overall square outer 5 profile is within said overall cross wing outer profile.

21. A driver for engaging a recess in the head of a fastener in torque transmitting relation having an engagement portion extending from a shank to a tip a 10 first distance, said engagement portion of said driver, as described in claim 20, wherein said square portion is formed by four walls extending at right angles to each other and having exposed sections extending between said adjacent walls of said wings.

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22. A driver for engaging a recess in the head of a fastener in torque transmitting relation having an engagement portion extending from a shank to a tip a first distance, said engagement portion of said driver, 20 as described in claim 10 wherein said included angle is 2.5 degrees.

23. A driver for engaging a recess in the head of a fastener in torque transmitting relation having an engagement portion extending from a shank to a tip a 25 first distance, said engagement portion of said driver, as described in claim 10, wherein said opposing walls are each inclined at an angle of 1.25 degrees to the vertical to cause said convergence.

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